

## **Abstract**

This is a research paper considering Mediterranean cyclones, their genesis, and trajectories of motion in the context of extratropical cyclones. Attention is mostly given to the presentation of Mediterranean cyclones, their spatial distribution and impact on weather in Europe. Cyclones from the Mediterranean region proceed through Europe following certain tracks where the Vb pathway, heading from the Gulf of Genoa towards the northeast, is the most compelling. Such cyclones affect weather especially in Central and Eastern Europe. The average number of Vb cyclones in Europe is roughly two to four events a year with an average lifetime of 3,1 days. Cyclones from the Mediterranean often have to cross the Alpine mountain range through the process of segmentation. Extreme and long-lasting precipitation falling from the cold sector of Vb cyclones is furthermore enhanced by low mountain ranges of Central Europe. Vb cyclones are also responsible for several significant flood events in Europe as well as heavy snowfall in the Apennines, eastern Alps and other mountain ranges.

Keywords: extratropical cyclone, Mediterranean, pathway Vb, retrogressive, extreme precipitation, flooding